

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BARNSTEAD PARADE DAM POND	Lake Area (ha):	283.28
Town:	BARNSTEAD	Maximum Depth (m):	3.6
County:	BELKNAP	Mean Depth (m):	1
River Basin:	MERRIMACK	Volume (m³):	279000
Latitude:	43°43'19" N	Relative depth:	0.9
Longitude:	71°71'17" W	Shore Configuration:	3.53
Elevation (ft) :	495	Areal water load (m/yr):	362.5
Shore length (m):	6726	Flushing Rate (yr⁻¹):	376
% Watershed Ponded:	4.6	P retention coeff.:	0.02
Watershed Area (ha)	21753.7	Lake Type	artificial

BIOLOGICAL:

22-Jan-04

20-Aug-03

DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 30%	OSCILLATORIA 15%
	#2	TABELLARIA 20%	SYNURA 10%
	#3	MALLOMONAS 15%	MOUGEOTIA 10%
CHLOROPHYLL-A (ug/L)			2.54
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 28%	sparse - no dominant
	#2	ASPLANCHNA 28%	
	#3	rotifer spp. 22%	
ROTIFERS/LITER		36	1
MICROCRUSTACEA/LITER		<3	2
ZOOPLANKTON ABUNDANCE (#/L)		36	3
VASCULAR PLANT ABUNDANCE			Very Abundant
SECCHI DISK TRANSPARENCY (m)			2.1
BOTTOM DISSOLVED OXYGEN (mg/L)		15.5	6.1
BACTERIA (E. coli, #/100ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m):	None
Hypolimnion volume (m ³):	None
Anoxic Volume (m ³):	None

CHEMICAL:

Lake: BARNSTEAD PARADE DAM POND

Town: BARNSTEAD

	22-Jan-04		20-Aug-03		
DEPTH (M)	1.5	3.0	1.0		3.0
pH (units)	6.0	6.0	6.1		6.2
A.N.C. (Alkalinity)	3.2	3.1	3.8		3.9
NITRATE NITROGEN	0.08	0.08	< 0.05		< 0.05
TOTAL KJELDHAL NITROGEN	0.50	0.30	0.40		0.40
TOTAL PHOSPHORUS	0.017	0.010	0.015		0.016
CONDUCTIVITY (umhos/cm)	56.2	55.1	54.5		54.5
APPARENT COLOR (CPU)	36	36	65		60
MAGNESIUM			0.64		
CALCIUM			2.6		
SODIUM			6.1		
POTASSIUM					
CHLORIDE	8	8	8		8
SULFATE	5	5	3		3
TN : TP	34	38	28		27
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2003

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	6	0	9	MESO

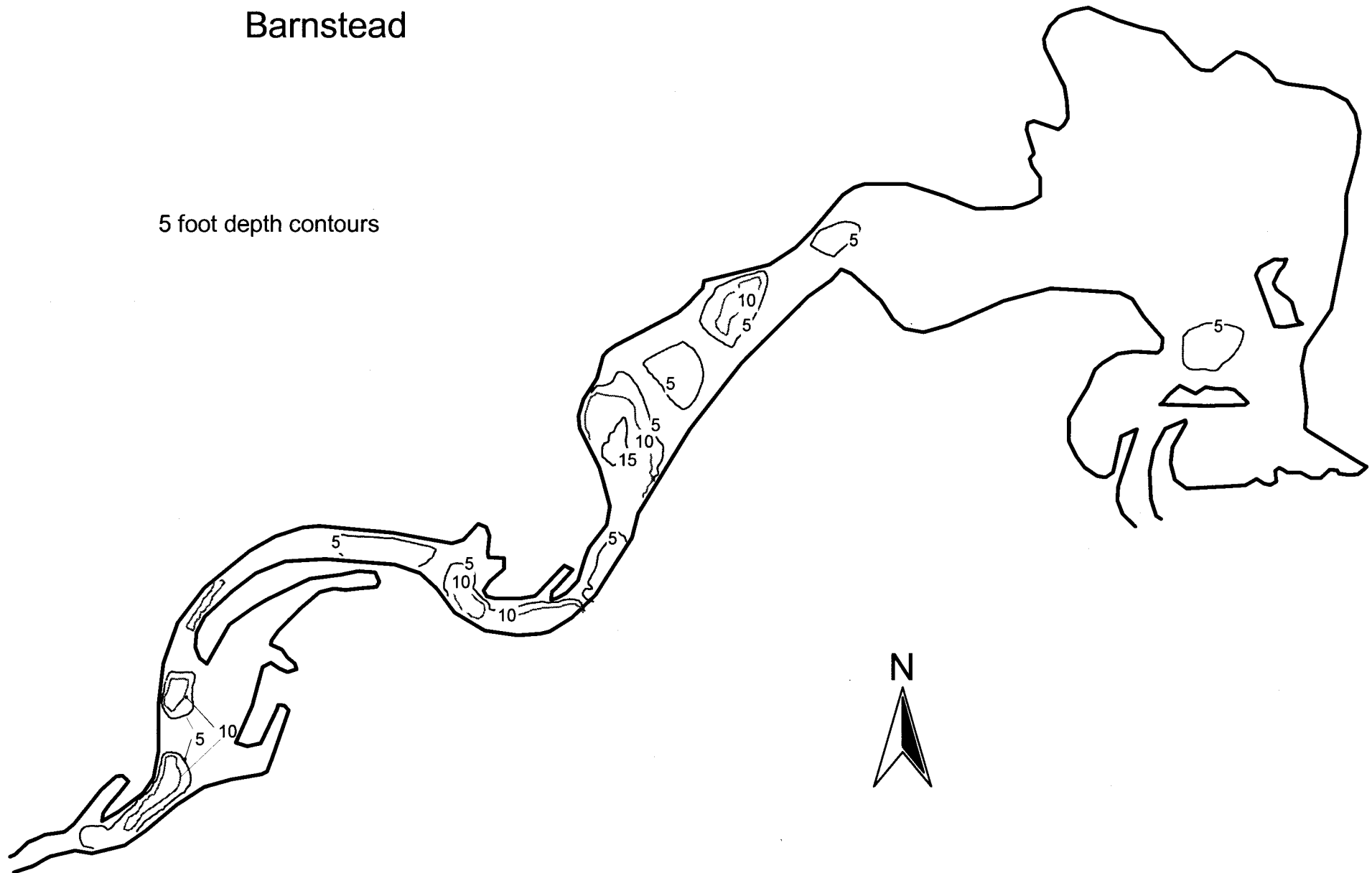
COMMENTS:

1. This is an impoundment of the Suncook River. It consists of a river-like channel from the dam up to a wide area at the upstream extremity of the impoundment.
2. Good boat launch site at the dam; no restrictions, launch is paved and parking available for 4 to 5 cars with trailers.
3. Good variety of summer phytoplankton present (no strong dominant – 20 separate genera observed). Zooplankton were unusually sparse.
4. Somewhat acid, tea-colored pond. Chlorides were not elevated significantly despite being located adjacent to Route 28 – probably because of the rapid flushing rate.

Barnstead Parade Dam Pond

Barnstead

5 foot depth contours



III-22

0 0.3 0.6 Kilometers

FIELD DATA SHEET

LAKE: BARNSTEAD PARADE DAM POND

TOWN: BARNSTEAD

DATE: 8/20/03

WEATHER: Sunny & hot; light breeze

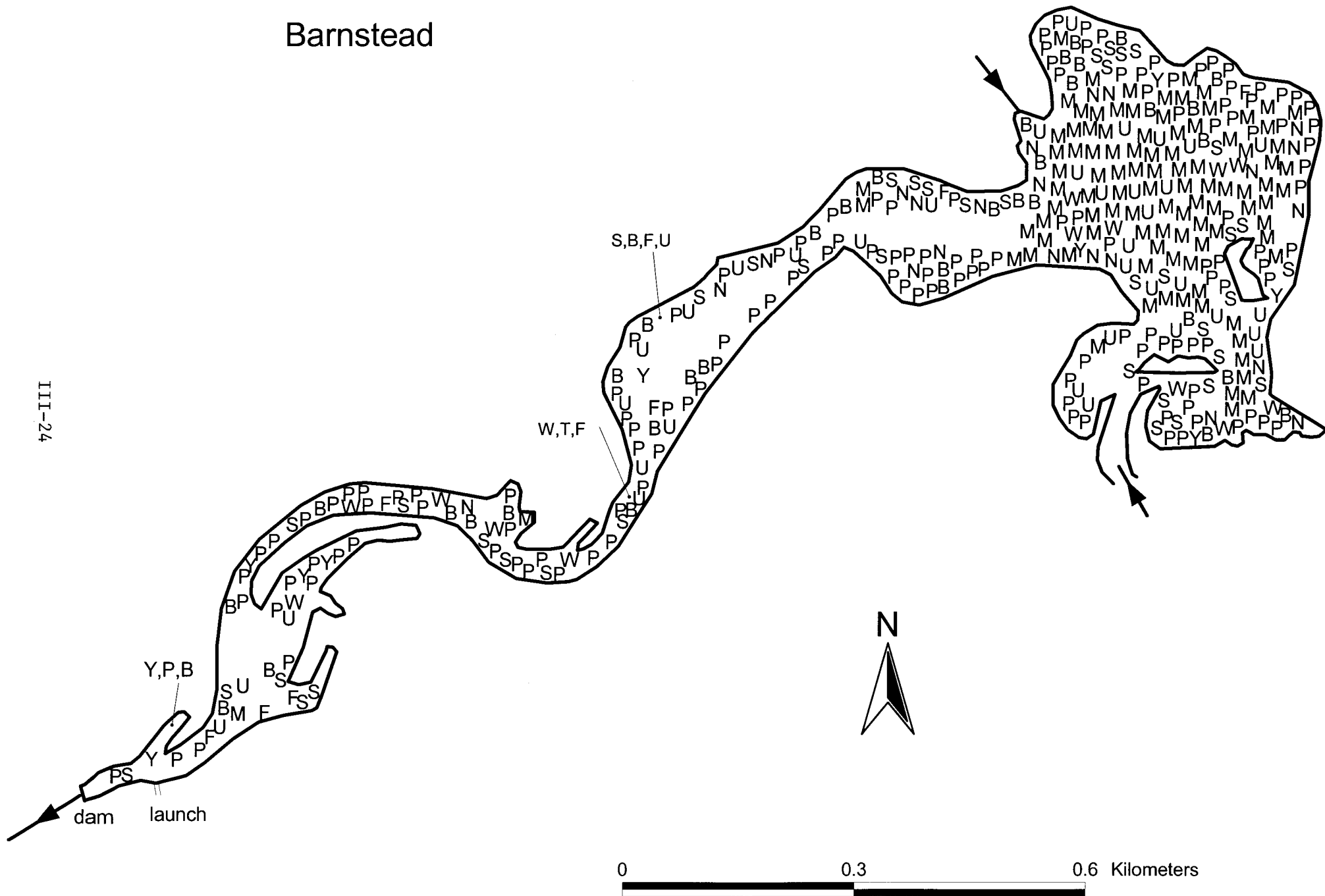
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SECCHI DEPTH (m) : 2.1
 BOTTOM DEPTH (m) : 3.6
 TIME: 1131

COMMENTS:

Barnstead Parade Dam Pond

Barnstead



AQUATIC PLANT SURVEY

LAKE: BARNSTEAD PARADE DAM POND **TOWN:** BARNSTEAD

DATE: 8/20/03

[illegible]

OVERALL ABUNDANCE : Very Abundant

GENERAL OBSERVATIONS :

1. Very abundant, flowering exotic milfoil was throughout this impoundment of the Suncook River (exotic milfoil-infested Locke Lake and Lower Suncook Pond are upstream of this impoundment).
2. Some pink lilies were present.
3. Bryozoans, painted turtles and jumping fish were observed.